SD
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U.S. Com. on Public Lands.

Calaveras Big tree national Forest.

Class SD 428
Book C2A5
1912

GAYLORD BROS.
MAKERS
SYRACUSE, N.Y.
PAT. JAN. 21, 1908

Calendar No. 470.

62D CONGRESS, 2d Session. } SENATE. { REPORT No. 523.

CALAVERAS BIGTREE NATIONAL FOREST.

MARCH 28, 1912.—Ordered to be printed.

Mr. SMOOT, from the Committee on Public Lands, submitted the following

REPORT.

[To accompany H. R. 12211.]

The Committee on Public Lands, to which was referred the bill (H. R. 12211) to amend the act of February 18, 1909 (35 Stat. L., 626), entitled "An act to create the Calaveras Bigtree National Forest, and for other purposes," beg leave to report the bill back to the Senate with the recommendation that it do pass.

The report of the House Committee on the Public Lands on this bill is as follows:

[House Report No. 397, Sixty-second Congress, second session.]

The Committee on the Public Lands, to whom was referred the bill (H. R. 12211) to amend the act of February 18, 1909 (35 Stat., p. 626), entitled "An act creating the Calaveras Bigtree National Forest, and for other purposes," having had the same under consideration, report it back with the unanimous recommendation that it do pass with the following amendments:

Page 2, line 5, strike out the letter "a" and insert "the actual."

Page 2, line 5, after the word "value," add the following words, viz, "in lands and stumpage."

Page 2, line 6, after the word "lands," add the following words, viz, "and stumpage."

Page 2, line 7, after the word "lands," change the period to a semicolon, and then strike out all after the word "lands," line 7, and all of lines 8, 9, 10, and the word "part" in line 11, same page.

The bill, H. R. 12211, strikes out of the act of February 18, 1909 (35 Stat., p. 626), the following language:

or all of three ways. They may be given the right to file with the Secretary of the Interior, within sixty days after any such conveyance, selections for an equal area of surveyed, unreserved, unappropriated, nonmineral lands, which, if found subject to such lieu selection, and of a value substantially equal to that of the amounts conveyed, may be patented to said owners in lieu of the lands conveyed, and if any selection is rejected, other selections may be made under conditions applicable to the one rejected—

And substitutes therefor the following, viz:

one or both of the following ways: (1) That they may be given the right to file with the Secretary of the Interior, within sixty days after such conveyance, selections of surveyed, unappropriated nonmineral public lands or of nonmineral national forest lands, and if the lands so selected shall be found subject to selection and of a value substantially equal to that of the lands conveyed, they may be patented to said owners in lieu of the conveyed lands: *Provided, however*, That in any case where any part of the lands selected is national forest land, the approval of the Secretary of Agriculture shall first be secured with respect to such part, or (2)—

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The act of February 18, 1909 (35 U. S. Stat. L., pp. 626–627), is as follows:

CHAPTER 143.—An act to create the Calaveras Bigtree National Forest, and for other purposes.

(Page 626.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of Agriculture, to secure and protect for all time the bigtrees scientifically known as *Sequoia washingtoniana*, is hereby empowered, in his discretion, to obtain for the United States the complete title to any or all of the following-described lands in the State of California: In township four north, range fifteen east, Mount Diablo meridian, the northeast quarter of section one; in township four north, range sixteen east, Mount Diablo meridian, the north half of section six; in township five north, range fifteen east, Mount Diablo meridian, the southwest quarter of section fourteen, south half of section fifteen, north half of section twenty-two, northwest quarter of section twenty-three, and southeast quarter of section thirty-six; and in township five north, range sixteen east, Mount Diablo meridian, the west half of section twenty-eight, the east half and southwest quarter of section twenty-nine, the southeast quarter of section thirty, all of sections thirty-

(Page 627.)

one, thirty-two, and the northwest quarter of section thirty-three. And such area or areas, as fast as complete title is acquired, shall be permanently held by the United States and shall be known as the Calaveras Bigtree National Forest, and shall be administered and protected by the Secretary of Agriculture from the funds appropriated for the administration of national forest land to prolong the existence, growth, and promote the reproduction of said bigtrees: *Provided,* That the owners of land acquired hereunder shall convey to the United States full title to any of the above-described areas approved for said national forest by the Secretary of Agriculture, the completeness of such title to be determined by the Secretary of the Interior in each case, and shall be reimbursed therefor only in any or all of the three ways: They may be given the right to file with the Secretary of the Interior, within sixty days after any such conveyance, selections for an equal area of surveyed, unreserved, unappropriated, nonmineral public lands which, if found subject to such lieu selection, and of a value substantially equal to that of the amounts conveyed, may be patented to said owners in lieu of the land conveyed; and if any selection is rejected, other selections may be made under the conditions applicable to the one rejected; or the Secretary of Agriculture may grant to any such conveying owner the right to cut from national forest land an amount of timber and wood substantially equal to the amount of timber and wood on the land acquired by the United States under the provisions of this act: *Provided,* That nothing contained in this act shall warrant an appropriation from the Treasury to carry out the terms of this act.

Approved, February 18, 1909.

Under the act of February 18, 1909, there was no provision made that the selection of the land in exchange could be taken from any national forest, whereas the amendment provided for by the provisions of the bill H. R. 12211 is to permit the selections of "nonmineral national forest lands." The approval of the Secretary of Agriculture shall first be secured with respect to any of such lands before exchange can be made. It having been determined by the various departments that there is no one tract of land provided for under the act of February 18, 1909, from which selection could be made, as it permitted the selection to be made of "surveyed, unappropriated, nonmineral public land" and excluded any selection of "nonmineral national forest land." The provisions of the proposed bill (H. R. 12211) make the act operative and put it in such shape that its provisions can be carried out by the Secretary of the Interior and the

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Secretary of Agriculture. The bill was referred to the Secretary of Agriculture, who has made favorable report thereon, which report is as follows:

DEPARTMENT OF AGRICULTURE,
OFFICE OF THE SECRETARY,
Washington, January 4, 1912.

Hon. JOSEPH T. ROBINSON,
Committee on the Public Lands, House of Representatives.

DEAR MR. ROBINSON: Your letter of December 19, inclosing a copy of the bill, H. R. 12211, to acquire the Calavaras bigtree grove, is received. The Calavaras bigtree (*Sequoia washingtonia*) of California are found in two groves. The larger one covers an area of 441.5 acres in sections 28 and 33, T. 5 N., R. 16 E., M. D. M., and the smaller grove of 49.5 acres is located about 6 miles distant in sections 14, 15, and 22, T. 5 N., R. 15 E., same meridian. All of the trees in these two groves are upon land held in private ownership. The greater part of them are owned by R. B. Whiteside. The groves were mapped and cruised during the field season of 1906 by a member of the Forest Service and the report was printed during the second session of the Fifty-ninth Congress (S. Rept. 6651).

The act of February 18, 1907 (35 Stat., 626), contained a provision for exchange which was unsatisfactory to the present owners of the trees. Under it only unreserved Government lands might be exchanged for the tracts supporting the bigtrees. There are not, however, to be found any unreserved lands of anywhere nearly equal value which would offer a fair exchange. In fact, there are few, if any, national forest lands having an equal acreage of the same value as the bigtree groves. Furthermore, the act of 1907 contained no appropriation to pay for locating the areas to be offered in exchange. As it is now proposed to amend the act, both of these features will be provided for. Lands of equal value without limitation as to acreage may be offered and also the $10,000 to be appropriated will cover the cost of locating and cruising both the groves and the Government lands. If it is passed, I feel that the exchange can be effected in a manner fair to the owners and with ample protection to the Government's interests.

I inclose a copy of my report on the bill (S. 8117) which became the act of February 18, 1907. The reasons given at that time for acquiring the grove still exist, and I therefore recommend that the present bill be given favorable consideration by your committee.

Very sincerely, yours,

W. M. HAYS,
Acting Secretary.

DEPARTMENT OF AGRICULTURE,
OFFICE OF THE SECRETARY,
Washington, January 28, 1907.

DEAR SIR: In accordance with your request made to the Forest Service, I have the honor to report upon the propriety of S. 8117, for the creation of the Calaveras Bigtree National Forest.

During the last field season the Forester caused a survey and complete examination to be made of the areas in California in which the bigtrees are located. I inclose maps and a report on the investigation, in which the location of the Calaveras bigtree groves, the ownership of the land especially desirable for a national forest to protect and prolong the life of the bigtrees, the number and size of the bigtrees and other species found with them, and a liberal estimate of the value of these groves have been set forth with care and detail.

Unless the principal owner of these groves will not accept a reasonable offer, I believe it will be possible in one or all of the ways authorized by S. 8117 to procure the title to the desired area without a direct appropriation from Congress. The Forester has received a definite suggestion from a citizen of California that it might be possible to procure by private subscription money amounting to one-third of the necessary purchase price. If this can be brought about it ought to be possible, either under the lieu selection provision or the stumpage exchange authorization, or both, to make up the remaining two-thirds.

I can not express too strongly my feeling that these great national wonders, famed throughout the world, should become the property of the Nation and be protected from intentional or accidental destruction as far as possible. It has taken thousands of years to produce many of these trees, and if once they were destroyed no skill or expense could bring similar wonders of creation into existence within a time represented by the known history of the world.

Very truly, yours,

JAMES WILSON, *Secretary.*

Hon. GEORGE C. PERKINS,
United States Senate.

The Secretary of the Interior made the following report on the bill:

DEPARTMENT OF THE INTERIOR,
Washington, January 17, 1912.

HON. JOE T. ROBINSON,
Chairman Committee on the Public Lands,
House of Representatives.

SIR: I am in receipt with your request for report thereon of copy of H. R. 12211, entitled "A bill to amend the act of February eighteenth, nineteen hundred and nine (Thirty-fifth Statutes at Large, page six hundred and twenty-six), entitled 'An act to create the Calaveras Bigtree National Forest, and for other purposes.'"

The apparent purpose of the proposed amendment is to permit the selection of nonmineral lands within national forests in lieu of lands conveyed to the United States under the act of February 18, 1909, supra, in addition to the permission accorded by that act for the exchange of surveyed, unappropriated, nonmineral, public lands outside of the national forests; also to make an appropriation for the purpose of carrying the provisions of the act into effect.

The desirability of securing title to the privately owned lands in question containing trees known as the *Sequoia washingtoniana* is apparent, and if it has not been and will not be possible to secure their exchange for an equal area of unreserved public lands, this department would favor the legislation permitting the exchange for lands within the boundaries of the national forests.

As this department is without information as to the success or nonsuccess of the efforts of the Secretary of Agriculture to secure the exchange under the act of February 18, 1909, supra, it is suggested that the measure be referred to him for report in that particular. If it shall then appear not feasible to secure title to the private lands in question through the preferred exchange for unreserved public lands, this department, as above indicated, would recommend the enactment of this measure to permit exchange for lands in forests, with the following additions or amendments to the bill:

Line 3, page 2, insert at beginning of line the words "for an equal area"; same line, after the word "surveyed" insert the word "unreserved"; page 2, line 7, after the word "lands" insert "and if any selection is rejected other selections may be made under conditions applicable to the one rejected."

Very respectfully,

SAMUEL ADAMS,
Acting Secretary.

It will be noted that the bill requires an appropriation of $10,000 to carry out its provisions; this appropriation is also recommended by the Secretary of Agriculture. Without an appropriation it will be impossible for the departments to fully consummate the objects and purposes of the bill.

The following extract from the report made by Senator Perkins on this subject, when the act of February 18, 1909, was under consideration, fully explains the purposes of the original act and the proposed amendment by bill (H. R. 12211):

> The purpose of this bill is to secure and protect for all time the bigtrees, scientifically known as *Sequoia washingtoniana*, located in the State of California and which are national wonders, famed throughout the world. In view of the fact that it has taken thousands of years to produce many of these trees, and if they were once destroyed no skill or experience could be found to bring similar wonders into existence within a known period of history; it is strongly recommended that the bill for the creation of this national forest may be favorably received by the Senate.

When the act of July 18, 1909, of which the bill H. R. 12211 seeks to amend, was under consideration, the recommendation of the Secretary of Agriculture was presented, as well as a history of the groves of bigtrees. The letter of the Secretary of Agriculture under date of January 28, 1907, together with the location and extent of the groves are more fully set forth in the attached correspondence, which is made a part hereof.

DEPARTMENT OF AGRICULTURE, OFFICE OF THE SECRETARY,
Washington, January 28, 1907.

DEAR SIR: In accordance with your request made to the Forest Service, I have the honor to report upon the propriety of S. 8117 for the creation of the Calaveras Bigtree National Forest.

During the last field season the Forester caused a survey and complete examination to be made of the areas in California in which the bigtrees are located. I inclose maps and a report on the investigation, in which the location of the Calaveras bigtree groves, the ownership of the land especially desirable for a national forest to protect and prolong the life of the bigtrees, the number and size of the bigtrees and other species found with them, and a liberal estimate of the value of these groves have been set forth with care and detail.

Unless the principal owner of these groves will not accept a reasonable offer, I believe it will be possible in one or all of the ways authorized by S. 8117 to procure the title to the desired area without a direct appropriation from Congress. The Forester has received a definite suggestion from a citizen of California that it might be possible to procure by private subscription money amounting to one-third of the necessary purchase price. If this can be brought about it ought to be possible, either under the lieu selection provision or the stumpage exchange authorization, or both, to make up the remaining two-thirds.

I can not express too strongly my feeling that these great national wonders, famed throughout the world, should become the property of the Nation and be protected from intentional or accidental destruction as far as possible. It has taken thousands of years to produce many of these trees, and if they were once destroyed no skill or expense could bring similar wonders of creation into existence within a time represented by the known history of the world.

Very truly, yours,

JAMES WILSON,
Secretary.

Hon. GEORGE C. PERKINS,
United States Senate.

REPORT ON CALAVERAS GROVES OF BIGTREES, CALIFORNIA.

[By Fred. G. Plummer, civil engineer, Forest Service.]

LOCATION.

The larger of the Calaveras groves is known as South Grove, and is situated in sections 28 to 33, inclusive, in township 5 north, range 16 east, Mount Diablo meridian, in Tuolumne County. It covers an irregular area of 441.5 acres along the narrow V-shaped valley of Bigtree Creek, which flows southwesterly into North Fork of Stanislaus River. This grove has also been called Stanislaus Grove.

The North Grove covers portions of sections 14, 15, and 22, in township 5 north, range 15 east, Mount Diablo meridian, and has an area of 49.5 acres. It occupies the floor of a small basin drained by a tributary of San Antonio Creek, and which is part of Calaveras River watershed.

The groves are only about 6 miles apart, but are geographically separated by a secondary divide from Sierra Nevada and by the canyon of North Fork of Stanislaus River, which is about 1,000 feet deep. North Grove is made easily accessible by a graded wagon road from Angels Camp (22 miles) and from Sonora (38 miles), but from this point the journey to South Grove is made by a trail, steep but safe.

NATURE OF THE REPORT.

The purpose of the survey, the locating of the bigtrees, the estimating of the stand of all species, and the subsequent inquiry were to determine the value of the forests. The contemplated purchase of the bigtree groves necessarily includes outlying areas of mixed forests over sufficient territory to guarantee their protection and proper administration if they are to be held by the Federal or State government.

Mr. Robert Whiteside owns nearly all of the bigtrees in both groves. All of the bigtrees were located and measured, and the mixed forests on Mr. Whiteside's land were surveyed and estimated. In this report the stand and value of all species will be shown segregated, and the results will give the value of lands owned by Mr. Whiteside, the value of additional lands which should be acquired, and also the value of lands

owned by Mr. Whiteside near South Grove, which are not essential for the protection of the groves.

The appraisement is liberal. The stumpage values were fixed after careful inquiry, correspondence, and consultation of county records of sales. No deduction was made on the fact that the timber is now quite inaccessible, although this would be considered by a dealer in timberland. Nor was any percentage subtracted from the bigtree estimates for the enormous waste—20 or 25 per cent—which would surely attend any logging operations. Deductions were made for all visible defects, but beyond this all boles were assumed to be sound, although this may not always be the case. The bigtree "Pioneer Cabin" is tunneled for a carriageway, and a serious defect is exposed in the heart of the tree, which might not have been suspected from the outside appearance.

The estimate of the timber contained in the groves is therefore believed to be somewhat in excess of what they would actually saw out; and the stumpage values assigned to the various species are believed to be somewhat larger than would be offered by a private person buying the groves as a business venture.

THE FOREST.

Although the areas under consideration are small, and the topography is not very bold, there are three types of cover, or zones, which are easily distinguished:

1. Bigtrees (*Sequoia washingtoniana*) are a valley type, with an altitudinal range from 4,675 to 5,350 feet. They are scattered through a mixed forest of sugar pine (*Pinus lambertiana*), white fir (*Abies concolor*), and incense cedar (*Libocedrus decurrens*).
2. Sugar pine and white fir dominate on the benches and lower slopes.
3. Yellow pine (*Pinus ponderosa*) is found along the dry summits and ridges.

Stray individuals of all species were found in all zones. Even a few isolated bigtrees were located on a ridge over the divide from the South Grove. Three red firs (*Pseudotsuga taxifolia*) were seen isolated from a higher zone, where they are more common. Black oaks are found in small groups, and alders follow the watercourses. They are commercially unimportant.

REPRODUCTION.

Generally the conifers reproduce rapidly, and in many places the thickets of young trees are almost impenetrable. Seedling bigtrees are numerous in South Grove, but only in spots where soil and light are favorable.

UNDERGROWTH.

In the valleys and on the lower slopes the principal undergrowth is composed of the young conifers, but on summits and ridges, where yellow pine is found in its typical open stand, there is considerable *ceanothus* and *arctostaphylos*.

FIRES.

A recent ground fire spread over the northwest portion of section 30, near South Grove. Although no material damage was done to the merchantable timber, the seedlings and saplings were practically destroyed, and the natural restocking has suffered a setback. During the life of the present mixed forest there has been no widespread conflagration or destruction of the overshading cover. Numerous fires have swept through undergrowth and ground cover, charring the butts of trees and causing deep fire scars where pitch or balsam rendered the boles inflammable. Although the bigtrees resist fire wonderfully, these repeated burnings have made many of them unsightly and have decreased their volume of merchantable lumber.

METHOD OF SURVEY.

The survey of South Grove comprised four propositions:

1. Random lines were run to connect all section and quarter-section corners, checking upon witness trees, and determining the true locations of the area under consideration according to Government survey. In the original field notes the magnetic variation was stated as 16½°, but was found to average 17½°.
2. A meander line was run along the boundary of the bigtree grove, including all of the bigtrees excepting six isolated individuals which are located in the vicinity of the quarter-section corner between sections 30 and 31.

3. Parallel lines were run north and south, 10 chains apart, for strip measurements on the mixed forests.

4. Base lines were run lengthwise through the bigtree grove, with stations located at each 330 feet difference of longitude. From these stations ordinates were run north and south, 330 feet apart, to the boundaries of the grove. As each ordinate was run, all the bigtrees within 165 feet of the line were measured and tagged to prevent omissions or repetitions.

SCALING.

In each strip measured, excepting the half strips on the boundaries, all of the trees of the mixed forest over 15 inches in diameter, excepting sequoias, were calipered to a distance of 66 feet each side of the line, and all the smaller within these limits were counted. The result was an accurate estimate of 20 per cent of the entire stand. For convenience, the strips were lettered from west to east, A, B, C, etc. (omitting I), and numbered from north to south, 1 to 17, inclusive. The diameters of trees were calipered 3 feet above the surface of the ground, and volume tables were prepared for each species on this basis.

In estimating the stand in the mixed forests it was found that the amount of merchantable dead stuff was inconsiderable—a small fraction of 1 per cent—and was ignored.

Each bigtree was measured and its volume computed separately. In each case the factors obtained were: The inside diameter at the surface of the ground, the height of stump, the inside diameter at the stump height, the height of merchantable bole, and the total height of the tree. From these data a diagram was prepared and the merchantable part of each tree was divided into 12-foot logs, and the number of board feet for each log was taken from Spaulding's Table, which has been legalized in California for the scaling of timber. This table gives the number of board feet in logs only up to 144 inches in diameter.

Logs larger than this were assumed to contain four times the volume of a log of half the diameter, on the theorem that the volume of logs increase as the squares of their diameters. Thus, a 200-inch log would have four times the volume of a log 100 inches in diameter. Any practical excess in merchantable length was included in the top log, which might, therefore, be 14, 16, 18, or 20 feet long.

At North Grove the same methods were used, excepting that 13.5 per cent of the mixed forest was measured instead of 20 per cent, as at South Grove. North Grove was examined in December, 1905, in deep snow, and the use of snowshoes was impracticable. For proper estimating 10 per cent is considered accurate.

MISCELLANEOUS NOTES.

The largest fallen tree in South Grove is "Old Goliath," which has a gross volume of 127,892 board feet. The largest at North Grove is "Father of the Forest," and through its hollow trunk one may ride horseback.

The largest standing tree in South Grove is "Louis Agassiz," which before being hollowed by fires probably had a gross volume of 124,163 board feet. In North Grove the "Mother of the Forest" probably had a gross volume of 140,619 board feet. It is dead, but standing.

The taper of the bigtrees varies from 3 to 12 inches for a 12-foot log, and will average between 6 and 7 inches.

The maximum thickness of bark is 24 inches. On all of the bigtrees the bark is deeply fissured, and at the butts is fluted. In estimating the inside diameters the deduction for bark is necessarily computed from the calipering of average outside diameters or such measured circumference as results from stretching a tape around the tree. In the latter case the tape describes a series of tangents. Under these methods the thickness of bark will average one-twelfth of the outside diameter.

CALAVERAS GROVES OF BIGTREES, CALIFORNIA.

TABLE I.—*Locations, areas, number of bigtrees, and stand, exclusive of mixed forest.*

	Area.	Merchantable trees.	Stand.	Stand per acre.	Average stand per tree.
SOUTH GROVE.					
T. 5 N., R. 16 E., M. D. M.:	*Acres.*	*Number.*	*Feet b. m.*	*Feet b. m.*	*Feet b. m.*
Section 28	44.5	74	2,161,183	48,566	29,205
Section 29	85.5	189	5,055,783	59,132	26,750
Section 31	165.5	259	[1] 7,025,686	42,451	27,126
Section 32	143.5	229	5,512,683	38,416	24,073
Section 33 [2]	2.5	9	347,899	139,160	38,655
Total	[3] 441.5	760	20,103,234	45,534	26,452
NORTH GROVE.					
T. 5 N., R. 15 E., M. D. M.:					
Section 14 [2]	1.5	4	146,002	97,333	36,500
Section 15	28.5	60	1,705,212	59,832	28,420
Section 22	19.5	38	1,109,346	56,890	29,193
Total	49.5	102	2,960,560	59,807	[4] 29,025
Grand total	491.0	862	23,063,794	46,973	26,756

[1] Two isolated individuals in section 30 are included.
[2] Not owned by Mr. Whiteside.
[3] Not including 6 isolated individuals in sections 30 and 31.
[4] Average stand for 98 trees owned by Mr. Whiteside is 28,720.

SOUTH CALAVERAS GROVE, CAL.

TABLE II.—*Estimates of mixed forest, exclusive of the Sequoias (T. 5 M., R. 16 E., M. D. M.), by sections and quarter sections (lands owned by Mr. Whiteside).*

[Trees over 15 inches in diameter.]

	Sugar pine.	Yellow pine.	White fir.	Incense cedar.	Total.	Average per acre.	Value.
	Feet B. M.	*Feet B. M.*	*Feet B. M.*	*Feet B. M.*	*Feet B. M.*	*Dollars.*	*Dollars.*
Sec. 28, SW. ¼	2,163,255	1,251,425	1,841,900	393,930	5,650,510	35,310	6,848
Sec. 29:							
NE. ¼	2,844,665	403,825	2,969,337	672,790	6,890,618	43,066	8,077
NW. ¼	3,251,510	628,518	2,525,836	434,587	6,840,452	42,753	8,406
SW. ¼	2,916,505	2,089,775	2,349,367	715,113	8,070,755	50,442	9,694
SE. ¼	3,182,920	756,862	2,628,938	496,450	7,065,170	44,157	8,598
Total	12,195,600	3,878,980	10,473,475	2,318,940	28,866,995	45,105	.....
Sec. 30:							
NE. ¼	1,262,798	2,134,100	1,129,775	601,362	5,128,035	32,050	5,992
NW. ¼	661,512	2,925,288	895,400	941,875	5,424,075	33,900	6,015
SW. ¼	1,193,810	1,462,075	951,475	391,863	3,999,223	24,995	4,766
SE. ¼	2,745,750	669,887	2,440,075	599,600	6,455,312	40,346	7,696
Total	5,863,870	7,191,350	5,416,725	2,534,700	21,006,645	32,823	.....
Sec. 31:							
NE. ¼	3,177,677	1,177,838	1,793,600	698,488	6,847,593	42,797	8,382
NW. ¼	2,478,845	387,237	2,475,013	474,237	5,815,332	36,346	6,914
SW. ¼	3,099,005	652,150	2,462,662	547,975	6,761,793	42,261	8,200
SE. ¼	2,365,815	545,900	1,956,938	548,725	5,417,377	33,858	6,462
Total	11,121,332	2,763,125	8,688,213	2,269,425	24,842,095	38,815	.....
Sec. 32:							
NE. ¼	2,393,420	1,027,638	1,746,537	640,862	5,808,457	36,303	6,942
NW. ¼	3,760,228	269,487	3,123,125	388,738	7,541,578	47,135	9,295
SW. ¼	2,733,855	1,169,063	2,098,600	722,812	6,724,330	42,027	8,022
SE. ¼	2,243,825	2,052,962	1,822,900	731,363	6,851,050	42,819	8,120
Total	11,131,328	4,519,150	8,791,162	2,483,775	26,925,415	42,071	.....
Grand total	42,475,385	19,604,030	35,211,475	10,000,770	107,291,660	39,445	128,429

CALAVERAS GROVE OF BIGTREES, CALIFORNIA.

TABLE III.—*Merchantable timber in 10 largest individuals in each grove.*

Survey field book number or name of tree.	Board feet.	Survey field book number or name of tree.	Board feet.
SOUTH GROVE.		NORTH GROVE.	
265 "Massachusetts"	118,241	91 "Mother of the Forest"	105,464
270 "Governor Stoneman"	108,783	72 "James King"	72,416
171	97,151	48 "Old Bachelor"	71,111
678	92,183	21 "Pride of the Forest"	69,886
222 "Waterloo"	91,841	74 "Doctor Kane"	65,352
405	91,746	45 "Daniel Webster"	64,914
108	90,977	44	62,267
538	86,811	73 "Sir John Franklin"	65,352
274	85,599	42 "Empire State"	52,900
271 "Pennsylvania"	82,704	50 "Mother"	52,203
Total	946,046	Total	681,685
Average	94,605	Average	68,168

TABLE IV.—*Bigtrees arranged according to contents of merchantable timber.*

	South grove.	North grove.		Total.
	All owned by Mr. Whiteside.	Owned by Mr. Whiteside.	Not owned by Mr. Whiteside.	
Less than 20,000 board feet	353	37	1	391
20,000 to 40,000 board feet	231	38	2	271
40,000 to 60,000 board feet	112	15		127
60,000 to 80,000 board feet	49	7	1	57
80,000 to 100,000 board feet	13			13
100,000 to 120,000 board feet	2	1		3
Total	760	98	4	862
Worthless, dead, and down	29	7		36
Total	789	105	4	898
Small big trees, poles, saplings, and seedlings [1]	3,462	1		3,463
Grand total	4,251	106	4	4,361

[1] The small big trees are very limby, but under "Michigan practice" they would yield about 40,000 board feet of inferior lumber which is not included in the estimate or appraisement.

SOUTH CALAVERAS GROVE OF BIGTREES, CALIFORNIA.

TABLE V.—*Bigtrees under 36 inches diameter.*

Diameter 3 feet above ground.	Number of trees.	Diameter 3 feet above ground.	Number of trees.
Less than 6 inches	3,356	28 inches	1
6 to 14 inches	56	30 inches	8
15 inches	1	32 inches	2
16 inches	2	33 inches	4
17 inches	2	34 inches	2
18 inches	9	35 inches	11
19 inches	1		
22 inches	3	Total	3,462
24 inches	4		

NORTH CALAVERAS GROVE, CAL.

Estimates on mixed forest, exclusive of the sequoias, in the south half of section 15 and the north half of section 22, township 5 north, range 15 east, Mount Diablo meridian.

Species.	Stand.
	Feet b. m.
Sugar pine	4,697,059
Yellow pine	5,348,224
White fir	2,084,737
Incense cedar	979,935
Total	13,109,955

NOTE.—In this tract of 640 acres there is a clearing of 25 acres. The timbered area of 615 acres has an average stand of 21,317 board feet per acre, exclusive of sequoias.

SOUTH CALAVERAS GROVE, CAL.

Appraisement of southwest quarter of section 28 and all of sections 29 to 32, inclusive, owned by Mr. Robert Whiteside.

Bigtrees, 19,755,335 board feet, at $2 per 1,000	$39,511
Sugar pine, 42,475,385 board feet, at $1.50 per 1,000	63,713
Yellow pine, 19,604,030 board feet, at $1.25 per 1,000	24,505
White fir, 35,211,475 board feet, at $1 per 1,000	35,211
Incense cedar, 10,000,770 board feet, at 50 cents per 1,000	5,000
Total	167,940
Average value per acre	51.74

NORTH CALAVERAS GROVE, CALIFORNIA.

Appraisement of south half of section 15 and north half of section 22, owned by Mr. Robert Whiteside.

Bigtrees, 2,814,558 board feet, at $2 per 1,000	$5,629.12
Sugar pine, 4,697,059 board feet, at $1.50 per 1,000	7,045.59
Yellow pine, 5,348,224 board feet, at $1.25 per 1,000	6,685.28
White fir, 2,084,737 board feet, at $1 per 1,000	2,084.74
Incense cedar, 979,935 board feet, at 50 cents per 1,000	489.97
Total for timber	21,934.70
In addition to the above, the cleared and cultivated area has a value, either to the Government or any other purchaser, as a necessary pasturage for horses, of	875.00
Total value	22,809.70
Average value per acre	35.64

Summary for land owned by Mr. Robert Whiteside.

At South Grove	$167,940
At North Grove	22,809
Total	190,749

RECOMMENDATION.

If the Calaveras groves are to be preserved as a public park, the areas which should be acquired do not include all the lands owned by Mr. Whiteside in the vicinity and include some not owned by him.

These are as follows:

For South Grove.

	Acres.
In T. 5 N., R. 16 E., M. D. M.:	
Sec. 28, W. ½	320
Sec. 29, E. ½ and SW. ¼	480
Sec. 30, SE. ¼	160
Sec. 31, all	641.20
Sec. 32, all	640
Sec. 33, NW. ¼	160
In T. 5 N., R. 15 E., M. D. M.:	
Sec. 36, SE. ¼	160
In T. 4 N., R. 15 E., M. D. M.:	
Sec. 1, NE. ¼	160
In T. 4 N., R. 16 E., M. D. M.:	
Sec. 6, N. ½	320
Total	3,041.20

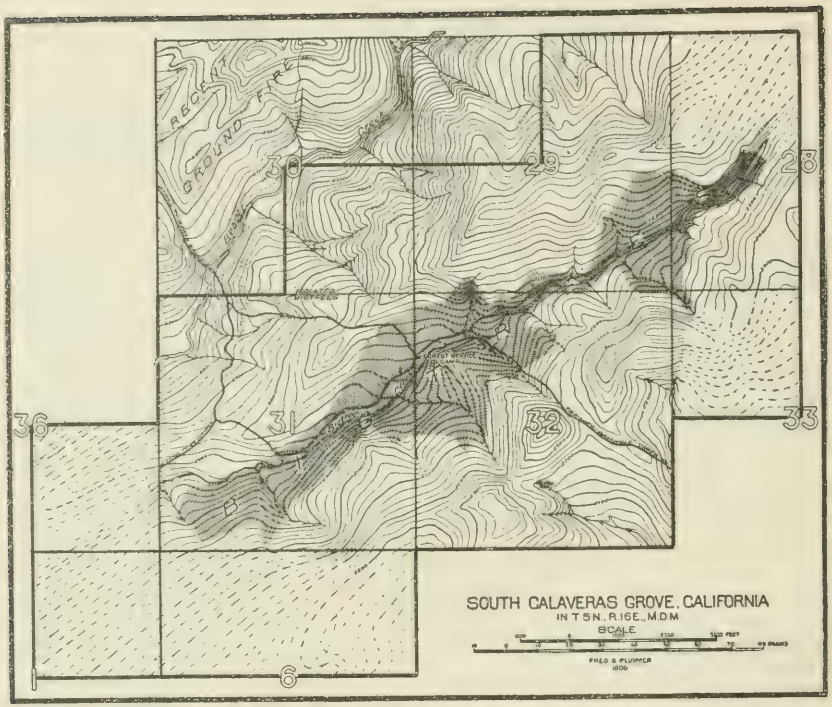
For North Grove.

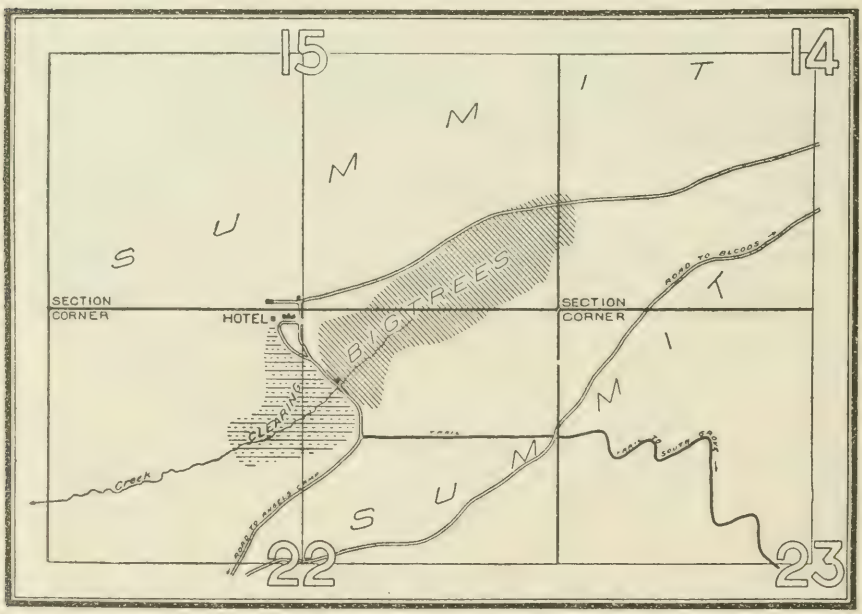
	Acres.
In T. 5 N., R. 15 E., M. D. M.:	
Sec. 14, SW. ¼	160
Sec. 15, S. ½	320
Sec. 22, N. ½	320
Sec. 23, NW. ¼	160
Total	960

In recommending these areas it is intended to control a sufficient area to insure protection from fire, and for this reason to include the summits of the ridges which bound the basins in which the bigtree groves are located.

The value of the merchantable timber on these tracts, based upon the survey and examinations as made, is as follows:

For South Grove	$179,873.18
For North Grove	30,417.90
Total	210,291.08
Add clearing at North Grove	875.00
Total value	211,166.08





NORTH CALAVERAS GROVE, CALIFORNIA

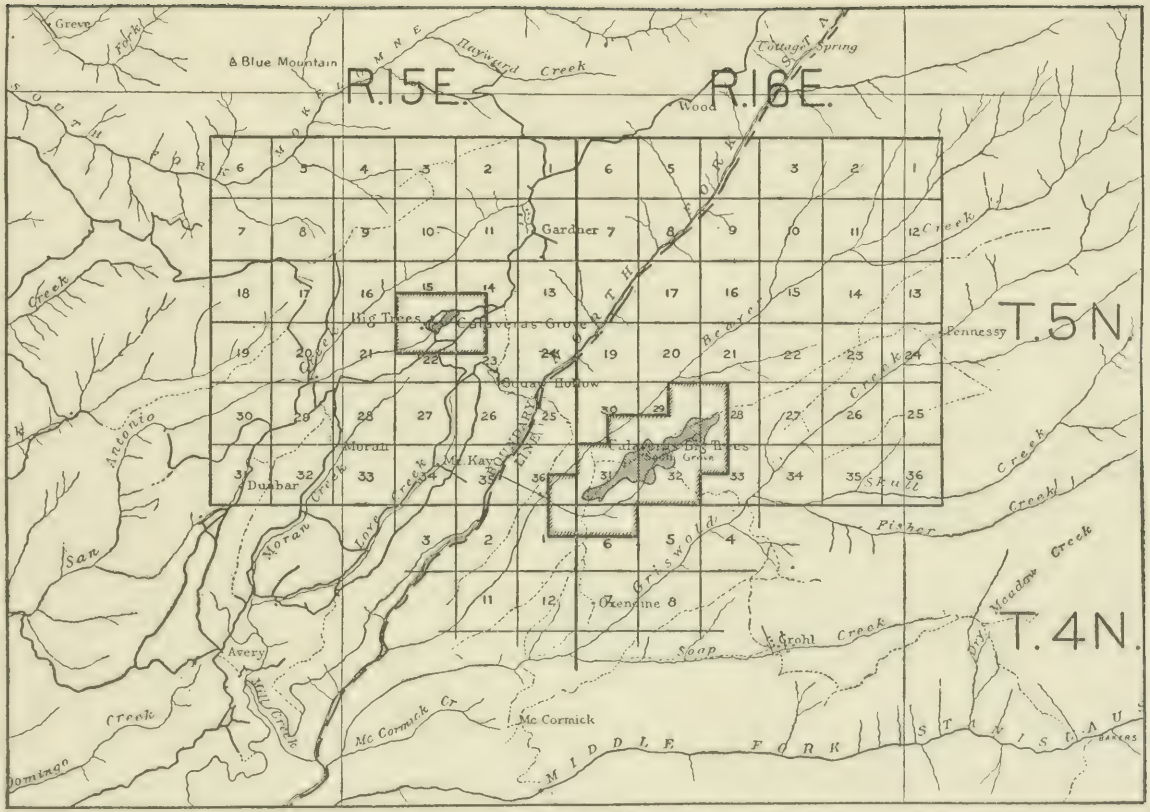
IN T. 5 N., R. 15 E., M.D.M.

SCALE

1000 0 1000 2000 3000 FEET

10 0 10 20 30 40 50 60 70 80 CHAINS

FRED G PLUMMER
1905



The heavy hatched line bounds the areas desired for the Calaveras Bigtree National Forest as described in the bill S. 8117.

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